

*The*

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NEW ENGLAND

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COLLEGE *of* OPTOMETRY

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CATALOGUE





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*The  
New England  
College of Optometry*

**1982-1984  
Catalogue**

ON THE COVER: The facades of Namias Hall, the college library and the Specialty Clinic reflect the architectural beauty of the college's setting in Back Bay Boston.

## *Foreword*

This Catalogue is provided for the limited purpose of providing information to students of NEWENCO during their course of study.

The College makes every effort to be certain that the Catalogue is substantially true and correct in content and policy as of the date of publication. It should not, however, be construed as the basis of an offer or contract between the College and any present or prospective student. While to the College's knowledge, the Catalogue contains no erroneous, deceptive, or misleading statements or omissions, the College retains the right to amend, add or delete any information in the Catalogue, including any course of study, program or regulation, subsequent to publication thereof. Announcements of such changes are made on a routine basis within the College.

### **EQUAL OPPORTUNITY POLICY**

*The New England College of Optometry prohibits discrimination on the basis of race, sex, religion, color, creed, marital or parental status, or national origin in the recruitment and admission of students; the recruitment and employment of faculty and staff, and the operation of its programs and activities, as specified by federal and state laws and regulations.*

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# Introductory Information 1

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## The Profession

Optometry began as a legally recognized health profession in the United States at the turn of the century. During the 1920's, a national optometric accrediting body was formed to evaluate educational programs and judge the quality of optometric education. This movement in optometric education closely paralleled a similar development in medical and dental education.

Between 1958 and 1965, a number of Federal laws were enacted which provided funds to increase manpower in the health fields and to further improve the quality of education. Optometry schools responded by making major improvements in facilities and by expanding clinical training.

Today, most students entering a career in optometry have earned baccalaureate degrees. The fifteen schools and colleges of optometry in the U.S. enroll approximately 1,000 students annually.

The Doctor of Optometry degree is a prerequisite for licensure eligibility in every state. Individual states may impose their own additional requirements for licensure — such as State Board Examinations, the National Board Examination, and practical examinations in clinical optometry.

Most of the 22,000 optometrists now active serve in private practice as primary health care practitioners — diagnosing and treating visual problems and providing health counseling. More and more optometrists, however, practice in clinical settings or are involved in government service, industry, school consulting, teaching and research.

## The College

### *History*

The New England College of Optom-

etry (NEWENCO) was established in 1894 as the Klein School of Optics, making it the oldest continuous school of optometry in the United States. This institution eventually became known as the Massachusetts College of Optometry, which was accredited and chartered in 1946. The College received the right to confer the degree of Bachelor of Science in Optometry in 1950, and the Doctor of Optometry (O.D.), the honorary Doctor of Ocular Science, and the Doctor of Humane Letters degrees shortly thereafter.

With this rapid growth the College found it necessary to increase its clinical opportunities for its students. The number of affiliations with external clinics has grown to over twenty-five, making possible a significant increase in the number and variety of patient encounters which students experience during clinical training.

New programs have also been added, including a two calendar year O.D. program for persons with a Ph.D. in the sciences, residencies in hospital based and rehabilitative optometry, and training for optometric technicians and assistants.

The change of name in 1976 from the Massachusetts College of Optometry to The New England College of Optometry more appropriately reflects the institution's constituency. About two-thirds of all students at the College are from the six New England states. Approximately 70 per cent of all optometrists practicing in New England graduated from NEWENCO. The College's ties to the region and its commitment to providing primary health care professionals in New England are central to its mission.

### *Location*

The central facilities of The New

England College of Optometry are located on historic Beacon Street in Boston, bordering the Charles River, Boston's Public Garden, the Museum of Fine Arts, Symphony Hall, the Boston Public Library, Fenway Park and the Prudential Center are all within one mile of the campus.

For sports enthusiasts, biking, sailing, and tennis facilities are available along the Charles River. In summer, Boston "Pops" concerts are performed outside on the Esplanade along the Charles.

All year round Boston's international restaurants, historic sites, and professional theater offer many opportunities for enjoyment. New England beaches are only a short drive from the city, and some of the finest skiing in the Northeast is within a two to three hour drive north of the city. In addition, the well known recreational areas of Cape Cod, Vermont, New Hampshire and Maine are all within accessible driving distance of Boston — the "Hub" of New England.

### *Facilities*

Beacon Street is the site of the College's main classroom building, specialty clinics, and library. The Boston Eye Clinic, a general service eye care center operated by the College, is in nearby Kenmore Square.

#### *The Main Classroom Building — Namias Hall*

The main classroom building of The New England College of Optometry, called Namias Hall after one of the school's most memorable professors, houses classrooms, administrative offices, and many of the College's instructional laboratories. The College Bookstore is located in this building, and serves students and alumni alike in providing current texts in vision and related sciences, as well as ophthalmic equipment.



### *Specialty Clinics*

The College's Specialty Clinics are located in the main classroom building. These are the Pediatric Clinic and the Low Vision and Rehabilitation Clinic.

The Pediatric Clinic provides comprehensive visual evaluations for patients from infancy to adolescence. These include tests for strabismus, amblyopia, perception and low vision. It also provides follow-up care in vision therapy with a unique interdisciplinary approach. Input from optometric, educational, and psychological professionals is joined together to provide a team evaluation for vision problems. This clinic provides opportunities for students interested in pediatric

optometry to gain clinical experience.

The Low Vision and Rehabilitation Clinic provides vision care services for those who, because of physical condition, age, accident, disease, or birth defect, have extremely poor eyesight uncorrectable by ordinary means. After taking into account each patient's lifestyle, professionals in the clinic evaluate the patient's eyesight and recommend the appropriate low vision devices.

#### *Library of Visual Sciences*

The library occupies four floors of an Italian Renaissance style townhouse located next to Namias Hall. Three professional librarians and their support staff provide the services of a modern instructional materials center.

The library houses an extensive collection of materials relating to vision care in both print and non-print formats. There are also rooms for quiet reading, areas for small groups to study together, carrels equipped for playback of audio-visual materials, and a photocopy center. Reference services include access to many of the world's computerized data bases. Bibliographic instruction is available during library hours.

From September through May, the library is open daily, except on legal holidays. During the summer months and vacation periods, it is open during business hours on weekdays and in the evening by appointment.

The library is a member of the Medical Library Association.

#### *The Boston Eye Clinic*

The Boston Eye Clinic, located in nearby Kenmore Square, is one of over twenty-five vision care and teaching sites of the College. Its purpose is to provide a full scope of high quality vision care to the community, and, as a teaching clinic, a high quality of clinical training to

clinical interns.

Services of the clinic include primary vision care, which includes eye examinations; dispensing services; contact lens services; and specialized services in ophthalmology and binocular vision. While working at the clinic, students are expected to take part in its various community outreach programs, which provide vision and glaucoma screening, home care, and vision services for the handicapped.

#### *NEWENCO's Clinical System*

The clinical training of optometric students is among the most important aspects of optometric education. To this end, The New England College of Optometry boasts over twenty-five affiliated clinical settings. These external clinics include community based health care centers, hospitals, and Veteran's Administration medical centers.

Among the current affiliates are:

Brighton Marine Public Health Center  
Brighton, Massachusetts

Brooks Army Medical Hospital  
San Antonio, Texas

Columbia Point Health Center  
Dorchester, Massachusetts

Connecticut Visual Health Center  
Bridgeport, Connecticut

Cotting School For Handicapped  
Children

Boston, Massachusetts

Dimock Community Health  
Center

Boston, Massachusetts

Dorchester House Multi-Service  
Center

Dorchester, Massachusetts

East Boston Neighborhood Health  
Center

East Boston, Massachusetts



Gesell Institute of Child  
 Development  
 New Haven, Connecticut  
 Hadassah Hospital  
 Jerusalem, Israel  
 Mary Imogene Bassett Hospital/  
 Department of Ophthalmology  
 Cooperstown, New York  
 NEWENCO Pediatric Clinic  
 Boston, Massachusetts  
 NEWENCO Rehabilitative Vision  
 Clinic  
 Boston, Massachusetts  
 NEWENCO Contact Lens Clinic  
 Boston, Massachusetts  
 North End Community Health  
 Center  
 Boston, Massachusetts  
 South End Community Health  
 Center  
 Boston, Massachusetts  
 University of Massachusetts/  
 University Health Services  
 Amherst, Massachusetts  
 VA Hospital/Brockton  
 Brockton, Massachusetts  
 VA Hospital/Newington  
 Newington, Connecticut  
 VA Medical Center/Providence  
 Providence, Rhode Island  
 VA Hospital/Eastern Blind  
 Rehabilitation Center  
 West Haven, Connecticut  
 VA Hospital/West Roxbury  
 West Roxbury, Massachusetts  
 VA Outpatient Clinic/Eye Clinic  
 Boston, Massachusetts  
 Walter Reed Army Medical Center  
 Washington, District of Columbia  
 Western Massachusetts State  
 Hospital  
 Westfield, Massachusetts

### *Accreditation*

The College is accredited by the Council on Education of the American Optometric Association, the official accrediting body of schools and colleges of optometry, and by the New England Association of Schools and Colleges. It is approved by the Veterans Administration for study under Public Law 358.



## The Role of Optometric Education

Optometrists are health care professionals who are specially educated and licensed to examine, diagnose and treat conditions of the human visual system. Their primary function is to gather information through the optometric examination, diagnose any abnormal visual conditions, and prescribe the proper optometric treatment, such as corrective lenses, contact lenses, or vision therapy.

The optometric examination may also reveal ocular or systemic conditions, such as glaucoma, cataract, diabetes and hypertension, which require referral to other health care practitioners. Optometrists must therefore understand the visual system as a reflection of the body as a whole, and be able to recognize the early warning signs of these and similar systemic disorders.

To prepare optometrists to meet these challenges, optometric education must have two major goals — to produce individuals capable of evaluating, diagnosing and correcting vision problems, and to provide competency in the recognition of ocular and systemic diseases that display ocular symptoms. Optometric education should therefore be comprised of a broad-based curriculum in the vision and basic health sciences, as well as training in preventative care and the early detection of disease.

Yet academic knowledge is not enough. Graduating doctors of optometry must be ready to meet the needs of their patients with the professionalism their career demands. For this reason, a major component of optometric education is clinical experience.

After four years of combined academic and clinical training, graduating students become doctors of optometry — individ-

uals prepared to meet the visual needs of their patients skillfully and confidently, and primary care vision professionals ready to interact with other health care providers to improve the human condition.

## Educational Objectives

In keeping with the role of optometric education outlined above, The New England College of Optometry has established the following goals for its educational programs:

- to provide an educational environment which insures intellectual growth and scholarly development.
- to provide education in the basic health sciences in order to foster understanding of the mechanisms that bear upon both the normal and the diseased human state.
- to provide education in the vision sciences so the student can come to understand the mechanisms underlying normal and abnormal vision and to appreciate the methodology used to diagnose and treat human visual conditions.
- to provide the student with clinical optometric measurement skills, and, through supervised clinical experiences, equip the student with a knowledge of ophthalmic devices and their applications, the skills used in patient interviewing and counseling, and the ability to make sound clinical judgements.
- to inculcate the attitudes and skills needed to detect diseases of the visual system and to recognize the early signs of high-incidence disease that may or may not affect the visual system.
- to familiarize the student with general and ocular emergency procedures.

- to provide the knowledge, skills and attitudes that will enable the optometrist to serve as a community resource in matters of applied visual science, disease prevention and sound health practices.
- to enable the detection and referral of patient problems that require attention by an optometrist with special knowledge and experience in fields such as pediatric, rehabilitative, or environmental optometry.
- to acquaint the student with modes of optometric practice and practice management techniques.

## The Four-Year O.D. Program

The four-year curriculum is comprised of four basic elements — the vision sciences, the basic health sciences, optometric theory and practice, and clinical experience. Each makes its contribution to the development of a competent, trained professional capable of solving problems of the human visual system.

The curriculum in the vision sciences provides knowledge in optics and an understanding of the structure and function of the visual system. To that end, the content of the curriculum is presented within three general areas: optics, physiological optics and ocular neuroscience.

Courses in the basic health sciences provide the student with an understanding of the normal and abnormal functions of the human organism. Background is provided in the fundamental biochemical and biophysical mechanisms and the physiological and pathological processes.

Optometric theory and practice provides students with a background for the specific skills, clinical insights, and

patient-handling capabilities required of optometrists. Coursework emphasizes general characteristics of human vision problems; measurement of the ocular refractive state; properties and use of ophthalmic lenses, devices and appliances; assessment of binocular status; detection of ocular and systemic diseases; clinical diagnosis; and optometric therapy.

Clinical experience enables the students to become competent patient care professionals who can integrate scientific knowledge with clinical insights to solve visual problems. It begins in the lecture-laboratory setting during the first year, and progresses to direct patient contact during the second, third, and fourth years. The preceptorship method is used throughout the program. It calls for close initial supervision, which is gradually relaxed as the student develops greater



clinical proficiency and assumes more responsibility. The role of the preceptor slowly changes from that of a supervisor to that of consultant.

The first two elements of optometric education, the vision and basic health sciences, are concentrated in the first two years of study. Some initial attention is also given to optometric theory and practice. From year to year the emphasis gradually changes, with optometric practices and clinical experience playing a larger part of the educational process by the third and fourth years.

### *The First Year*

#### *Courses*

#### FALL QUARTER

Geometric Optics  
 Visual Perception and Psychophysics  
 Ocular and Human Anatomy  
 Cellular Physiology/Biochemistry/  
 Molecular Pathology I  
 Optometric Methods Lab I  
 Health Care in the U.S.A.

#### WINTER QUARTER

Visual Optics  
 Visual Perception and Psychophysics  
 Neuroanatomy  
 Cellular Physiology/Biochemistry/  
 Molecular Pathology II  
 Systems Physiology  
 Optometric Methods Lab II  
 Basic Optometry Theory and Methods I

#### SPRING QUARTER

Ophthalmic Optics  
 Ocular Physiology  
 Visual Neurophysiology  
 Systems Physiology  
 Microbiology, Immunology and Genetics  
 Optometric Methods Lab III  
 Basic Optometry Theory and Methods II  
 Epidemiology

#### *Educational Plan*

Study in the visual sciences commences with ocular anatomy, embryology, and

the neuroanatomy and neurophysiology of the sensory and motor pathways of the visual system. Simultaneously, students learn about visual perception and the problems in subjective testing of vision. The foundation for more advanced topics is provided with introductory courses in geometrical and physiological optics.

In the basic health sciences emphasis is placed on the biological sciences, such as biochemistry, histology, endocrinology, systems physiology, immunology, and microbiology.

The coursework in the vision and basic health sciences make up a majority of the material covered in the first year. Optometric theory and practice is introductory in nature providing a basis of terminology and the first exposure to the ametropias and anomalies of binocularity and accommodation. Clinical experience at this point is limited to the lecture-laboratory.

### *The Second Year*

#### *Courses*

#### FALL QUARTER

Physical and Modern Optics  
 Ocular Myology  
 Pathophysiology  
 Mechanical Optics  
 Optometric Methods Lab IV  
 Refractive and Accommodative  
 Anomalies  
 Introduction to Clinical Practice

#### WINTER QUARTER

Radiometry/Photometry/Colorimetry  
 Monocular Sensory Aspects of Vision  
 Anomalies of Binocular Vision  
 Pathophysiology  
 Development and Abnormal Psychology  
 Optometric Methods Lab V  
 Introduction to Clinical Practice

#### SPRING QUARTER

Monocular Sensory Aspects of Vision  
 Developmental and Abnormal  
 Psychology

Visual Space Perception  
Sensory and Motor Anomalies  
Patient Interviewing and Counseling  
Contact Lens Theory and Methods

#### *Educational Plan*

Study in the visual sciences includes the physical aspects of electromagnetic radiation and the principles of the measurement and specification of light. Presentation of the concepts relating to the understanding of visual perception encompasses the study of basic visual attributes, such as color, pattern and movement, and adaptation.

The basic health sciences are oriented toward the physiological and biomedical sciences, with coursework in medical genetics, pathophysiology, and developmental and abnormal psychology.

Through material in optometric theory and practice students acquire an in-depth understanding of the ametropias and binocular and accommodative anomalies. They learn concepts related to the fitting of contact lenses; are introduced to methodologies for evaluating motor and sensory anomalies and assessing the status of binocularity; receive a background in clinical diseases and clinical optics; and acquire certain ophthalmic mechanical skills.

During the second year the application of the student's scientific knowledge and optometric skills begin to be practiced in actual clinical settings. Here students, under the direction of a preceptor, learn to correlate optometric findings and develop clinical insights into the treatment and management of visual problems through direct patient contact.

### *The Third Year*

#### *Courses*

#### FALL QUARTER

Normal and Abnormal Development  
of Vision

General Pharmacology  
Basic Clinical Practice  
Contact Lens Theory and Methods  
Ocular Disease  
Clinical Medicine for Optometrists  
Pediatrics  
Evaluation of the Child  
Clinical Management of Binocular  
Accommodative Anomalies  
Rehabilitative Optometry

#### WINTER QUARTER

Ocular Pharmacology  
Applied Ocular Pharmacology  
Basic Clinical Practice  
Contact Lens Theory and Methods  
Ocular Disease  
Clinical Medicine for Optometrists  
Pediatrics  
Learning Disabilities  
Clinical Management of Strabismus and  
Amblyopia  
Rehabilitative Optometry  
Seminar in Physiological Optics  
(Elective)  
Independent Research in Physiological  
Optics (Elective)

#### SPRING QUARTER

Applied Ocular Pharmacology Lab  
Advanced Clinical Practice  
Contact Lens Clinical Practice

#### *Educational Plan*

Topics in the vision sciences include the development of vision, how anomalies occur, and ocular pharmacology. Other topics provide for a basic understanding of the mode of action of pharmacologic agents and the systemic effects of various ophthalmic drugs.

In this year, study in the basic health sciences gives way to advanced coursework in optometric theory and practice. Students study in more detail the ocular and systemic diseases, and rehabilitative, pediatric and environmental optometry, each with an increased emphasis on

clinical exposure.

In the clinics, students refine their skills in diagnosis, case analysis, prescription, binocular vision assessment and therapy, patient management, and the interdisciplinary approach to patient care. Students acquire clinical skills related to general health assessment; develop a more thorough understanding of clinical pharmacology; and come to appreciate the role of the primary health care practitioner. They learn to apply the principles of clinical epidemiology and the skills of a primary health care professional to patients with previously undetected health problems.

### *The Fourth Year*

#### *Courses*

#### FALL QUARTER

Counseling Psychology  
Ocular Assessment and General Medical Emergencies  
Visuo-Neurological Dysfunction  
Selected Readings in Optometry  
Current Developments in Optometry  
Health Care Quality Assurance  
Practice Development and Administration  
Health Education and Counseling  
Geriatrics  
Electrodiagnositics

#### WINTER QUARTER

Contact Lens Clinical Practice  
Interdisciplinary Clinical Practice  
Pediatric Clinical Practice  
Rehabilitative Clinical Practice  
Pediatric/Rehabilitative Clinical Practice

#### *Educational Plan*

Students continue their study of advanced optometric theory and practice. They expand their knowledge of emergency procedures, neurological assessment, and the detection and management of patients with ocular diseases. Recent advances in the field and advanced subject

matter are addressed in a program of special lectures and readings.

The clinical experience culminates with two twelve-week rotation periods at any of the over twenty-five settings affiliated with the college. These include community and hospital based settings. Rotations are also available in the clinics operated by the college which offer general, contact lens, ophthalmological, ocular photographic, pediatric, rehabilitative, and electro-diagnostic services.



## Course Descriptions

### *The First Year*

#### *Geometric Optics*

The following topics are presented: image formation by reflection and refraction in mirrors, lenses, and prisms; analysis of thin lens combinations and thick lenses in terms of cardinal points; limitation of rays by apertures; and aberrations of optical systems and the theory of optical instruments.

#### *Visual Perception and Psychophysics I & II*

A two quarter course which seeks to describe the problems that the brain must deal with in order to see. In the first quarter, material covered includes psychophysics as the data describing the function of sensory systems. Visual information processing is also approached, which describes vision as sequential processes, such as iconic memory, short term memory, long term memory and recognition.

In the second quarter classical visual perception is discussed through topics such as size, depth and brightness constancy; motion and direction perception; Gestalt psychology; and the plasticity of perception. Clinical material is introduced where appropriate. Psychophysics as methodology emphasizes the theory of threshold and clinical methods for determining them, signal detection theory as the theoretically superior way to study sensory function, and finally the problems of clinical research.

#### *Ocular and Human Anatomy*

The macroscopic and microscopic anatomy of the eye, ocular adnexa and extraocular muscles is integrated with clinical correlations and anatomical parameters of the optometric examination. Ocular embryology presents the morphology and chronology of the develop-

ing eye and orbital structures. Assigned readings and laboratory exercises provide a basic understanding of ultrastructures and the gross anatomy of the head and neck.

#### *Cellular Physiology/Biochemistry/ Molecular Pathology I & II*

Structure and function of proteins, carbohydrates and lipids with special emphasis on genetic codes, energy transfer, and membrane chemistry.

#### *Optometric Methods Lab I-V*

Laboratory practice in elementary optometric procedures including acuity testing, keratometry, external examination, subjective refraction, retinoscopy, tonometry, lensometry, biomicroscopy, visual fields, and case history.

#### *Health Care in the U.S.A.*

Description of the larger health system and the optometrist's relationship to it through the disciplines of history, economics, law and clinical medicine.

#### *Visual Optics*

The study of the eye as an optical instrument. Subject matter includes optical and physical constants of the eye; theoretical aspects of refractive anomalies, mechanisms of accommodation, and the function of the pupil as an aperture; depth of field and optical aberrations of the eye; and the optics of ophthalmic instruments.

#### *Neuroanatomy*

The gross and microscopic anatomy of the peripheral and central nervous systems with emphasis upon the visual pathways and associated tracts. Functional aspects and physiological correlates are described, and complete circuits for information flow and processing are identified. Special attention is paid to the cranial nerves and their peripheral distribution. Neurocytology and neuroembryology are included



to clarify structural-functional relationships.

#### *Systems Physiology I*

Blood and Cardiovascular physiology, body fluids, and regulation of body fluids.

#### *Basic Optometry Theory and Methods I & II*

Theoretical principles underlying the elements of the optometric examination including measures of visual acuity, external evaluation procedures, keratometry, retinoscopy, subjective refraction, and phorometry.

#### *Ophthalmic Optics*

The principles of geometric optics applied to the study of the optical characteristics of ophthalmic lenses including spheres, cylinders, prisms, multifocal lenses, and contact lenses. Design parameters of ophthalmic lenses and their application to the correction of vision defects.

#### *Ocular Physiology*

Biochemical and biophysical properties of the eye including intraocular pressure and its regulation, aqueous humor,

corneal metabolism and transparency, response of the cornea to injury, the function of tears, lens transparency, physical properties and function of the vitreous, visual pigments and bleaching, and metabolism of the retina.

#### *Visual Neurophysiology*

The transduction, coding, and transmission of visual information and the relationship of neural events to the structure of the visual system and to perceptual phenomena. Visual behavior in terms of the integration of information from different regions of the brain.

#### *Systems Physiology*

The endocrine glands, their secretions, physiological actions and pathophysiology. Vitamins and nutrition, with emphasis on ocular manifestations of deficiency and toxicity.

#### *Microbiology, Immunology and Genetics*

Classification of microorganisms; bacterial ecology and host-parasite relationships; infections of the eye. Elements of the immune response, antigens and antibodies; physiology of immunology; possible mechanisms for uveitis.



### *Epidemiology*

Study of the determinants of disease as well as other variables, including the behavior of health care providers and patients, that determine health outcome.

## **Second Year**

### *Physical and Modern Optics*

The physical processes involved in the emission and absorption of electromagnetic radiation. Wave and particle properties of light and the part these properties play in the interaction between light and matter. Theories of diffraction, interference, and polarization and the uses of these phenomena in modern science, including the latest developments in holography and optical fibers.

### *Ocular Myology*

Anatomical, physiological, neuropharmacologic, cybernetic and kinematic properties of motor systems related to the intrinsic (iris and ciliary) and extrinsic (extraocular and adnexal) musculature. Methods of measurement and specification of relevant variables.

### *Pathophysiology*

Pathological processes; inflammation, repair and healing; infections, neoplasias and disturbances of cell growth; hemodynamic imbalances; selected topics in particular disease processes.

### *Mechanical Optics*

Lectures and laboratory cover ophthalmic fitting, adjusting and repair procedures, prescription ordering, verification, inspection, and lensometry.

### *Refractive and Accommodative Anomalies*

Classification, etiology, incidence, symptoms, diagnosis, and treatment of myopia, hyperopia, astigmatism, anisometropia, accommodative anomalies and aphakia.

### *Introduction to Clinical Practice*

Through observation and participation in the examination process the student clinician is introduced to direct patient care. Closely supervised by a preceptor, students gradually increase their responsibilities commensurate with increasing levels of competence and development of skills. The student experience is designed to acquaint him/her with the doctor-patient relationship, basic methods of examination and patient management.

### *Monocular Sensory Aspects of Vision I & II*

The sensory aspects of vision and visual perception are considered in terms of the underlying physical and/or physiological mechanisms. Topics included are the absolute threshold, functional properties of rods and cones, light and dark adaptation, spatial aspects of vision including brightness discrimination, visual acuity and the contrast sensitivity function and temporal aspects of vision including afterimages, critical fusion frequency, and subfusional flicker phenomena. The characteristics of normal and defective color vision are discussed along with an examination of the evidence for the principal theories of color vision. The clinical methods applied to the assessment of color vision status are included.

### *Developmental and Abnormal Psychology*

Theories of human development; behavioral disorders and psychopathology.

### *Anomalies of Binocular Vision*

Diagnosis, classification, and treatment of heterophorias including epidemiology and etiology, binocular refraction, motor evaluation, graphical analysis, fixation disparity, and introduction to treatment procedures.

### *Sensory and Motor Anomalies*

Clinical assessment of visual acuity, macular integrity, visual fields, acquired

color defects, integrity of cranial nerves, pupillary reflexes, anomalies of extra-ocular muscles, and nystagmus.

#### *Patient Interviewing and Counseling*

Interpersonal skills and skills in history-taking are examined, evaluated and remediated through lectures and small-group workshops utilizing videotapes of clinician-patient interviews.

#### *Contact Lens Theory and Methods*

Lectures and laboratory concerned with the various elements of hard and soft contact lenses and other lens materials; verification of specification, lens handling, fitting procedures, diagnostic techniques and dispensing; corneal physiology.

#### *Basic Clinical Practice I-III*

With continued guidance and supervision, the student assumes increased levels of responsibility for patient care and application of more advanced skills in patient interviewing, decision-making and problem-solving. The student is introduced to management of patients with binocular dysfunction, eye disease, ocular photography, and participates in screenings in the community.

#### *Radiometry/Photometry/Colorimetry*

The measurement and specification of visual stimuli is presented within the framework of photometric and colorimetric concepts. Included topics are the relationship of radiometric and photometric units, photometric measurements, and the principles of illumination. The characteristics of emission of various types of light sources are discussed. The terms and concepts of the CIE system and the Munsell system of color notation are applied to the measurement and specification of color.

#### *Visual Space Perception*

Elements of spatial orientation including oculocentric and egocentric orientation. Considered are the empirical cues to depth, binocular correspondence, the horopter, Panum's area, fusion, rivalry, stereopsis, stereoacuity, and the neurophysiological aspects of binocular vision, and the nature of aniseikonia and its measurement.

#### *Pathophysiology*

Pathological processes; inflammation, repair and healing; infections, neoplasias and disturbances of cell growth; hemodynamic imbalances; selected topics in particular disease processes.

#### *Developmental and Abnormal Psychology*

Theories of human development, behavioral disorders and psychopathology.

### ***The Third Year***

#### *Normal and Abnormal Development of Vision*

Anatomy and physiology of early visual development and effects of visual deprivation on this development. Characteristics of sensory-motor anomalies, including strabismus and amblyopia, that relate to abnormal development. Maturation of visual perception and visual learning in infants.

#### *General Pharmacology*

General pharmacology deals with the fundamental properties of drugs and with the principles that govern their use. Dosage forms, routes of administration, absorption, biotransformation and excretion are dealt with generally with particular attention paid to systemic drugs currently in widespread use. The course also deals with the important ocular side effects of a number of important systemic medications.

### *Contact Lens Theory and Methods*

Lectures and laboratory concerned with the various elements of hard and soft contact lenses and other lens materials; verification of specifications, lens handling, fitting procedures, diagnostic techniques and dispensing; corneal physiology.

### *Ocular Disease*

Mechanisms in ocular pathology including inflammation, neoplasia, glaucoma and vision loss. Signs and symptoms of specific categories of disease including the orbit, ocular adnexa, conjunctiva, cornea, sclera, uvea, lens, vitreous, retina, optic nerve, and neural visual system.

### *Clinical Medicine for Optometrists*

Principles of medicine applicable to optometry and recognition of ocular manifestations of systemic disease. Topical material includes medical history and physical examination; cardiovascular disease; neurological and endocrinologic disorders; immunology; rheumatology, and allergy; nutritional and metabolic disorders; oncology and hematology, and selected aspects of pulmonary, renal and gastrointestinal disease.

### *Evaluation of the Child*

Presents a structural approach to evaluating children from infancy through adolescence.

### *Clinical Management of Binocular Accommodative Anomalies*

The course begins with a presentation of an organized approach to analysis of optometric data which leads into a classification of common accommodative and non-strabismic binocular vision problems. Each entity is discussed in terms of symptoms, signs, etiology, and clinical management. Vision therapy is

emphasized as a treatment approach for these anomalies. Designing, implementing and managing a vision therapy program is discussed in detail. The laboratory portion of the course is designed to familiarize students with vision therapy instrumentation.

### *Rehabilitative Optometry*

Diagnosis, management, and treatment of low vision anomalies caused by the degenerating effects of age, or by disease or injury.

### *Ocular Pharmacology*

Ocular pharmacology deals with the basic properties, clinical attributes, and practical applications of drugs used in ophthalmic diagnosis and treatment. Principal concern, however, is with those drugs that are applied topically to the eye for diagnostic purposes. Emphasis is placed upon contraindications, precautions, potential drug interactions, dosage and administration, as well as upon possible adverse reactions, both ocular and systemic.

### *Applied Ocular Pharmacology and Lab*

Common diagnostic and therapeutic drugs — their mechanism of action, duration and side effects are discussed. Diagnostic testing procedures — applanation and indentation tonometry, gonioscopy, Hruby lens, fundus contact lens, ophthalmodynamometry and indirect ophthalmoscopy — their theory and technique, related anatomy, normal variants and associated pathologies are presented.

Lab — clinical experience with all diagnostic instrumentation presented above.

### *Learning Disabilities*

Presents an interdisciplinary team approach for the child with school related difficulties.

### *Clinical Management of Strabismus and Amblyopia*

An organized approach to the evaluation of a strabismic and/or amblyope is stressed. All associated anomalies such as eccentric fixation and anomalous retinal correspondence are discussed in terms of etiology, signs, symptoms, significance, and management. Vision therapy as a treatment procedure for these conditions is stressed and discussed in detail. The laboratory portion of the course is designed to familiarize students with testing and therapy procedures used with these patients.

### *Seminar in Physiological Optics and Neuroscience*

A number of current topics in physiological optics and neuroscience are discussed throughout the quarter. Students are held responsible for contributing to the overall discussions as well as presenting a topic of their own interest. Class size is limited and enrollment is with instructors approval only.

### *Independent Research in Physiological Optics*

An elective course intended for the student who wishes to gain experience in vision-related research, this course is offered upon request by the student and with the approval of the responsible instructor and academic administration. Area and scope of investigation, course format and protocol, and academic credit to be granted are arranged for on an individual basis. Depending upon the student's research background and academic qualifications, this course may be concerned with vision research at either an elementary or an advanced level.

### *Advanced Clinical Practice*

The student participates in clinical practice on a full-time basis at an ad-

vanced level. Students may be assigned to clinical centers in the Greater Boston area for this period. The student is encouraged to accept broad responsibility in the diagnosis and management of optometric problems.

### *Contact Lens Clinical Practice*

The theory and laboratory aspects of contact lenses presented in the didactic contact lens course are transferred into direct clinical practice. Each student spends part of two quarters in the contact lens service where he/she works directly with faculty in the provision of contact lens care. Evaluating, fitting, and follow-up care are provided with many forms of conventional hard, oxygen permeable hard, and soft contact lenses.

## **The Fourth Year**

### *Counseling Psychology*

Doctor/patient communication and associated problems; community resources.

### *Ocular Assessment and General Medical Emergencies*

Selected topics in ocular disease, in-depth methodologies for the symptom-oriented investigation of ocular disease and appropriate management thereof; ocular emergencies including presentation of overt insult to the eye — foreign bodies, abrasions, lacerations and chemical burns; and management of patients with sudden vision loss, diplopia or ptosis. General emergencies include: dealing with patients with syncope; seizures; acute airway obstruction; hypoglycemia; cerebro-vascular accident; drug-induced collapse and psychiatric disorders; respiratory disorders; shock and trauma; thermal injuries; intoxications and ingestions; and legal implications of emergency care.

### *Visuo-neurological Dysfunction*

Topics in the field of visuo-neurology, including transient loss of vision, eye pain, headache, optic nerve disease, supranuclear disorders of eye movement, and non-ocular neurological symptomatology.

### *Selected Readings in Optometry*

Readings on significant topics within optometry which serve to increase the student's breadth and depth of knowledge.

### *Current Developments in Optometry*

An invited lecture series designed to provide an update on recent developments and to supplement the normative curriculum.

### *Health Care Quality Assurance*

A view of 'quality assurance' as a multidimensional process which, at a minimum, requires accurate measures of the technical competence of the provider and mechanisms to improve the level of practice.

### *Practice Development and Administration*

A course designed to develop an understanding of the feelings, issues, concepts and social values related to successful performance of the optometrist in the profession. It is designed to develop organizational communicative and management skills so that the optometrist can become knowledgeable and successful in the development and the administration of a professional practice regardless to the mode of practice.

### *Health Education and Counseling*

Identification of the optometrist's role as a health educator resource within the community and the development of the skills and knowledge necessary to fulfill this role.

### *Geriatric Health and Illness*

This course is designed to familiarize

students with basic concepts in gerontology and geriatrics that are relevant to their future professional careers. Lectures and readings will address a broad range of topics in aging ranging from the biological to the social and economic that will place the issues of health and disease in old age in perspective in relation to the wider contexts of health care and health policy in the United States.

### *Electrodiagnostics*

Diagnosis of functional and organic defects of the eye and of vision by means of the electroretinogram (ERG), electro-oculogram (EOG), and visual evoked response (VER). Lectures and demonstrations.

### *Interdisciplinary Clinical Practice*

Students are placed in a wide network of multi-disciplinary clinical sites such as health centers and hospitals. Patient populations in these sites manifest a broad array of ocular and general health problems providing students with extensive experience with other health care providers such as internists, neurologists, ophthalmologists, social workers, etc.

### *Pediatric Clinical Practice*

Students are assigned to clinics, health centers, and other settings having a high prevalence of pediatric patients. Experience is gained in the examination and management of small infants, children, children with vision problems associated with other developmental disabilities; patients with strabismus and other congenital and acquired anomalies.

### *Rehabilitative Clinical Practice*

Students are assigned to clinics, health centers and hospitals having atypical patient populations with a high prevalence of geriatric, emotionally or physically handicapped or visually handicapped patients.

## The Accelerated Two-Year O.D. Program

This program, for students with advanced credentials, leads to the O.D. degree after two full calendar years of concentrated study. The program is designed to take advantage of the intensive backgrounds of the students, their ability for concentrated independent study, and previously developed educational skills, to cover the same material as the four-year program.

To be considered for admission to the two-year program, applicants must hold an earned doctorate or equivalent in one of the biological, physical, or behavioral sciences. They must also have demonstrated high scholarship in graduate study and be strongly motivated to enter the profession of optometry.

Students entering the two-year program should specifically request application materials for the two-year program. They will be expected to attend an interview at the College to determine their suitability for the study of optometry.

Since its inception in 1972, the program has offered career change and career expansion opportunities to many individuals. They find employment in private or group practice; in health maintenance organizations, public health hospitals, clinics or military service; and in school systems, industries and public health agencies. In addition, there is also a need for optometric educators and researchers, roles for which Ph.D.-O.D. recipients are particularly qualified.

## Paraoptometric Programs

Paraoptometrics are allied health care personnel who support the work of optometrists as participating members of the health care team. They may be optometric technicians or optometric assistants. The New England College of Optometry offers programs for both.

The Optometric Technicians Program requires two years of training and leads to the Associate in Science degree. During the first year the candidate carries out a program of general studies fulfilling specific pre-requisites. These first year credits are not offered at NEWENCO but can be earned at any accredited two year or four year institution. Where possible it is recommended that the planned first year program be approved by the NEWENCO admissions office to assure a smooth transition into the second year. This second year, conducted at NEWENCO, is professional in nature and includes courses in optometry, anatomy, vision sciences, management, contact lenses and other areas.

The Optometric Assistant Program requires one year of training and leads to



certification as an Optometric Assistant. Students complete the same coursework in optometry but not the general academic coursework. This provides the students with the needed training in a well structured academic setting. The program is designed for the mature person who wishes to augment general skills with specific technical training to provide a basis for re-entry into the job market.

Further program, tuition and financial aid information is available by writing the Director, Paraoptometric Programs, The New England College of Optometry, 424 Beacon Street, Boston, MA, 02115.



## Post-Doctoral Residencies

The College offers a number of post-doctoral one year residencies. These are programs for the graduate optometrist who desires more advanced training in a specialized area of optometry. Each residency is offered in conjunction with a Veteran's Administration Medical Center or Outpatient Clinic. Specialties addressed are Hospital Based Optometry and Rehabilitative Optometry.

Applicants for residency positions should be graduate optometrists with excellent scholastic records, strong clinical potentials, and an interest in dealing with extraordinary visual problems.

Applicants should direct inquiries to The Dean of Academic Affairs, The New England College of Optometry, 424 Beacon Street, Boston, MA 02115.

## Continuing Education

The college considers continuing education a major responsibility and is dedicated to serving the needs of members of the profession throughout their careers.

Courses, seminars, lectures, and practicums are offered through its Office of

Continuing Education to keep practitioners up to date with advances in health care, science, and clinical techniques relevant to the practice of optometry. A rounds program is presented as an adjunct to certain lecture programs, giving the practitioner an opportunity to review the latest diagnostic techniques in an academic clinical setting. Programs are sometimes offered in New England and other parts of the country with the cooperation of local optometric societies and other colleges of optometry.

The New England College of Optometry is a recognized provider of continuing education by all states having education requirements and by the American Optometric Association.





# Admission to the College

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## Admissions Policies

The New England College of Optometry seeks to admit students who are firmly committed to, and have sound aptitudes for, improving the human condition through the profession of optometry. In practice, then, the College looks for students with a background of traditional courses in the arts and special capability in three areas: biological, physical, and behavioral sciences.

Generally, the College maintains a flexible admissions policy. While we look for students with science aptitude, we recognize that excellent academic performance in other subject areas is also an important indicator of probable success in the academic program.

In an effort to insure that the students we accept will succeed both in their studies at the College and in the profession of optometry, we select only students who demonstrate:

- strong commitment to learning
- high sense of social concern
- great respect for individual dignity
- strong desire to become an optometrist
- ability to understand the responsibility and societal obligations of professionals

We examine all obtainable data which can serve to indicate the student's possession of the above characteristics. Factors we have found particularly useful include:

- Recommendation of applicants by people of respected judgment
- grade point average
- scholastic aptitude test scores
- Optometry College Admission Test scores
- content of courses pursued in pre-optometric college education
- extra-curricular activities

- ability to communicate and articulate
- academic potential
- leadership potential
- personality and demeanor

In 1982, 87 per cent of the entering class of the four-year O.D. program possessed at least a bachelor's degree. The mean G.P.A. was 3.20, and the mean age 22 years. Women comprised almost 25 per cent of the class.

Applicants from all states and foreign countries are considered for admission. Several state legislatures have contracted with the College to ensure that spaces are available for their qualified residents over and above the number that might be filled in open competition. In this way, the states which participate in this program help to ensure that their future optometric needs will be met. Students admitted under a state contract therefore have a higher chance of acceptance, as well as a reduction in tuition (see chapter on Financial Information).

## Entrance Requirements

Students entering the program must have basic prerequisite knowledge to insure minimal difficulty with the material presented in the educational program.

1. A minimum of three years at an accredited college or university.
2. The following specific coursework:
  - Chemistry (with lab)  
two semesters
  - Organic Chemistry (with lab)  
one semester
  - Biology (with lab)  
two semesters
  - Mathematics (including calculus)  
two semesters
  - Physics (with lab)  
two semesters

English	two semesters
Psychology	one semester
Statistics	one semester
Humanities	four semesters
Social Sciences	four semesters

## Application Instructions

Application for admission to the College should be filed as soon as possible after August 1. It is best to complete your file early, since the Admissions Committee reviews and votes upon applicants as soon as all of the required materials are received. There is no real deadline for completing files, although applicants are urged to have the required information sent by March 31. Chances of admission are reduced after this date.

Applicants are required to submit the following:

1. A completed application form, along with a check or money order in the amount of \$50, payable to The New England College of Optometry. The application fee is non-refundable.
2. Complete, official transcripts of all secondary schools and colleges attended, plus results of the Optometry College Admission Test (OCAT) and all standardized tests taken (SAT, CEEB Achievement Tests, Graduate Record Exam etc.). Arrangement can be made for taking OCAT's by contacting the Psychological Corporation at 304 East 45th Street, New York, NY, 11007. It is strongly urged that applicants take the test no later than the fall of the year preceding the desired admission date.

3. A recommendation from the Pre-Professional Committee is required, if the applicant's school has one. The committee recommendations are usually a composite or series of letters, but count in total as just one recommendation. When no such committee exists, two letters from professors who taught the applicant in college may be substituted.

Interviews with at least two members of the Admissions Committee are required in all but exceptional instances. Interviews are initiated by the Committee; however, students who wish to visit the school for counsel prior to formal application are encouraged to request an appointment.

Application forms and complete details may be obtained from:

Dean of Student Affairs  
The New England College of  
Optometry  
424 Beacon Street  
Boston, Massachusetts 02115

All material submitted to the College in the course of the admissions procedure becomes the property of the College. It will be respected for its confidentiality, but will not be returned or forwarded.

## Transfer Students

When openings in advanced classes permit, the College accepts students currently enrolled in an accredited school or college of optometry. Placement is contingent upon satisfactory completion of courses equivalent to those in The New England College of Optometry curriculum.

Transfer credits are accepted only after review of the applicant's optometry school transcript by the Academic Dean and the Dean of Student Affairs. Official approval and certification of good aca-

demic standing is required from the dean of the school the applicant is currently attending.

### **Veteran's Policy**

Eligible veterans are especially encouraged to apply for admission.

The New England College of Optometry is approved for study under Public Law 348. Veterans covered by this law are

expected to pay all charges in the same manner as non-veterans. Their tuition deposit is returned when their certificate of eligibility is received by the Financial Aid Administrator, who serves as the veterans' counselor.

The Financial Aid Administrator will assist all qualified veterans in securing funds from the Veterans Administration, certify their attendance at the College, and process V.A. forms in order to expedite payment to the veteran.





# Financial Information

## Tuition

The Board of Trustees of The New England College of Optometry established a new tuition policy in February of 1980. Referred to as Balanced Tuition, it applied to students entering in the fall of 1980. It will continue to be applied to this class as they advance through the College, and to each incoming class, such that the Balanced Tuition policy will apply to all four years by the fall of 1984.

Balanced Tuition is based on the College's total cost of providing optometric education less institutional income from outside sources. For 1982-83 the Balanced Tuition was \$2,990 per quarter, or \$8,970 per year for students in the four-year O.D. program, and \$11,960 per year for students in the accelerated (two calendar year) program.

### State Contract Tuition Reductions

The actual tuition paid by entering students is the current tuition less any applicable financial support. Much of this support is derived from contractual arrangements between the College and individual states. These contracts reserve a set number of spaces for regional students in the four year O.D. program and allow these students to compete for admission only with others from the same state. The value of these contracts varies, but on the average they amount to a tuition reduction of \$4,400 per year. Applicants should contact the Admissions Office to find out if their state has a contractual arrangement with the College.

## Fees

Other financial obligations for students entering the fall of 1982 are as follows:

- Application Fee  
(non-refundable) . . . . . \$50
- Tuition Deposit

- (non-refundable, payable upon acceptance, applies to tuition) . . . . . \$500
- Activities Fee  
(determined annually by Student Council) . . . . . \$42

All tuition and fees are due and payable on or before the first day of classes at the beginning of each quarter, except those of in-coming students, which are due July 1. Late payments will incur a \$25 service fee plus 1½ per cent per month of the outstanding balance. No students may complete registration or attend classes without having paid all charges in full or making appropriate arrangements to do so with the Dean of Student Affairs. The Board of Trustees reserves the right to change tuition and fees with no less than ninety days notice.

## Refund Policy

Tuition and fees are refunded to the student who withdraws or is dismissed from the College in accordance with the following formula:

### WITHDRAWAL DATE

- Prior to first day of class  
*100% less \$500 refunded*
- During the first two weeks  
*75% refunded*
- During the first four weeks  
*50% refunded*
- During the first eight weeks  
*25% refunded*

## Financial Aid

The College administers limited funds to assist qualified students in meeting their financial obligations. Financial aid officers will work on a one-to-one basis with all qualified applicants to create a package of loans, work study and other

forms of assistance to help reduce their financial burden.

Applicants for financial aid, whether new or returning students, must file the following forms with the Office of Financial Aid:

1. A NEWENCO Financial Aid Application.
2. A Graduate and Professional School Financial Aid Service (GAPSFAS) form filled out by both the student (and spouse) and his/her parents. Parental information is required regardless of the applicant's age, or marital income tax status. GAPSFAS forms are available by writing to GAPSFAS, Box 2614, Princeton, New Jersey 08541, or from the NEWENCO Financial Aid Office.
3. Copies of the student's (and spouse's) and parents' Federal income tax returns.

The College administers three sources of Federal aid to students. The *National Direct Student Loan Program* provides low interest, long-term, deferred loans. The *Health Professions Loan Program* provides long-term, deferred loans at 9% interest for students enrolled in a health professional course of study. The *College Work-Study Program* promotes the part-time employment of students. Available job opportunities are posted. Eligibility for funding from these three sources is determined by the Office of Financial Aid.

The *Guaranteed Student Loan Program* enables the student with financial need to borrow directly from a bank, credit union, savings and loan association or other participating lender which is willing to make the loan. Graduate and professional students may borrow up to \$5,000 per year with a total aggregate borrowing limit of \$25,000, including

loans made at the undergraduate level.

The *Health Education Assistance Loan (HEAL)* allows a student to borrow up to \$20,000 per year with a total aggregate borrowing limit of \$80,000. The average interest rate on HEAL loans in 1981 was 18%, but the rate is subject to change quarterly. There is no federal interest subsidy, but payment of principal and interest may be deferred while the borrower is a full-time student.

Loan applications are available from the Financial Aid Office or from participating lenders (banks, savings & loan associations, etc.).

A NEWENCO *Scholarship*, which covers full tuition remission, is awarded each year. To be eligible a student must represent an ethnic or racial minority within the United States or be a citizen of a developing country. Applications are available in the spring from the Office of Student Affairs.

Other *Scholarship* monies are awarded with eligibility determined by financial need and academic standing. These applications are available during the year from the Office of Financial Aid.

Further detailed information on all the above programs and a Financial Aid Handbook can be obtained by calling or writing NEWENCO, Office of Financial Aid, 424 Beacon Street, Boston, MA 02115.

## Registration

In order to register, the entering first-year student must:

1. fulfill all prior academic requirements before the stated enrollment date;
2. remit tuition and fees as specified in a written communication from the Registrar within the designated time limit; and
3. report for registration as specified in the communication from the Registrar and participate in formal registration procedures.

Second, third, and fourth year students in the four-year program and second year students in the two-year accelerated program may pre-register by mail.

## Degree Requirements

Students in the four-year program may earn one or both of the following degrees.

### *Bachelor of Science in Optometry (B.S.)*

Students who have completed a minimum of sixty semester hours or equivalent (twenty hours of which may have been applied toward a prior baccalaureate degree) may apply for the degree of Bachelor of Science in Optometry. The degree is awarded on the recommendation of the faculty and by approval of the Board of Trustees upon successful completion of the first two years of the four-year program.

### *Doctor of Optometry (O.D.)*

The Doctor of Optometry degree is the professional degree and is a prerequisite of licensure eligibility. Award of the degree is made by the Board of Trustees upon recommendation of the faculty following satisfactory completion of the professional curriculum in optometry.

The College also awards the honorary

degrees of Doctor of Ocular Science (D.O.S.) and Doctor of Humane Letters (H.L.D.).

## Academic Status

Students are required to maintain a cumulative G.P.A. of 2.20 to maintain academic status. Information on grading policies and procedures for disciplinary action and appeal is provided to all students at the time of registration.



# Student Services and Activities

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## The Student Council

The Student Council is organized to govern the internal affairs of the NEWENCO student body. The council consists of twenty-one voting members: 4 representatives from each class in the four-year program and 2 representatives from each class in the two-year program. One representative from the American Optometric Student Association also attends the student council meetings and is entitled to vote.

Council sponsored activities cover a wide range of athletic, social, and academic programs. Students can stay in shape during the winter months by becoming a member of the *Hockey Club*, a group which battles it out on the ice once a week during hockey season. This club also sponsors a free skate night, open to all from novice to expert. The *Basketball Club* performs the same service once a week to those preferring a hoop instead of a goal, and the *Running Club* gives immediate companionship for one-milers as well as marathoners. There is also a *Ski Club*, which takes advantage of the snow covered White Mountains only two or three hours from Boston.

The biggest social activity of the year is the "Eyeball," a formal get together held just prior to graduation. Other functions include Christmas parties, a fall picnic on one of the Boston Harbor Islands, and Harbor Cruises. College publications, the newsletter "Eyewitness," and the year-book "Reflections" are also run by the Student Council.

Other student programs provide note-taking and copying services, a photography darkroom, and guest lecturers. In 1981, NEWENCO students played a leadership role in coordinating the Inter-professional Health Alliance — a group composed of students from neighboring medical, dental and osteopathic schools.

The AOSA is the national optometric student organization. Every student of NEWENCO becomes a member of AOSA when their activity fee is paid. Members receive a National Board Student Handbook, National Board Anatomy Terms Review Booklet, AOA senior information kit, AOSA "Foresight" newspaper and other special handouts. AOSA student liaison and the committee chairperson provide input to a variety of organizations including the National Board of Examiners in Optometry (NBEO), the Armed Forces Optometric Society (AFOS), Association of Schools and College of Optometry (ASCO), and various other divisions of the American Optometric Association (AOA).

Local AOSA activities at NEWENCO include lunchtime seminars, special speakers and films, panel discussions on optometric interests, test files in the Library, and the annual student variety show. Special interest groups serve women in optometry, student couples, and those on armed forces scholarships.

### Vosh

This program of the AOSA deserves special attention. Standing for Volunteer Optometrists in Service to Humanity, this group sends interested students to countries lacking optometric care for an intensive three or four day vision testing program. Students examine the eyes of local residents and dispense eyeglasses. Any first, second, or third year students who donate their time to VOSH become eligible in their fourth year to join a group in the Latin American optometric examinations.

## Counseling

The College offers appropriate counseling to students whose academic progress is impeded either by a personal



problem or an academic deficiency.

Counseling services are available at the college, but students requiring further psychological counseling are referred to a therapist in private practice, upon approval of the Dean of Student Affairs. Such counseling is confidential.

## Housing

The College has no dormitory facilities, and students must be prepared to make their own arrangements for locating suitable living accommodations in the Boston area. The College assumes no formal responsibility for finding these accommodations, but a copy of "A Renter's Guide to Boston" is on hand in the College Library, and the office of the Dean of Student Affairs can provide helpful tips and occasionally information as to other students seeking roommates.

The campus is located within walking distance of numerous apartment facilities and is three blocks from the nearest

subway stop.

## Health Insurance

While the College does not maintain a health insurance program, it does provide information concerning a group insurance plan which includes major medical, illness, and hospital benefits.

Enrollment is optional. Forms are available during registration. Rates for this insurance are relatively low because it is a group program designed especially for students. Enrollment is open four times during the year.

## Placement

A list of opportunities is maintained in the Office of Student Affairs. Students seeking employment may fill out a form that will be matched with available opportunities and forwarded to the positions available which the student has designated. It is up to the individual or agency seeking an employee to contact the student.



# Faculty, Board and Administration

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## The Faculty

### *Full-Time, 1982-1983*

- Richard Apell, Professor of Optometry, O.D., ICO
- Fred Bloom, Assistant Professor of Optometry, O.D., MCO
- James A. Brockway, Assistant Professor of Optometry, O.D., MCO
- Richard Calderon, Assistant Professor of Optometry, O.D., MCO
- Nancy B. Carlson, Assistant Professor of Optometry, O.D., NEWENCO
- John H. Carter, Professor of Optometry and Physiological Optics, O.D., Pennsylvania College of Optometry; M.S., Ph.D., Indiana University
- Depew M. Chauncey, Jr., Assistant Professor of Optometry, Ph.D., University of California; O.D. NEWENCO
- Larry R. Clausen, Associate Professor of Optometry, O.D., Pacific College of Optometry; M.P.H., University of Michigan
- Elliot Cohen, Instructor in Optometry, O.D., NEWENCO
- James P. Comerford, Associate Professor of Physiological Optics, M.A., Ph.D., University of California; O.D., NEWENCO
- William M. Dell, Associate Professor of Optometry, and Public Health, O.D., MCO; M.P.H., Harvard School of Public Health
- Chanel Dufour, Senior Instructor in Clinical Optics
- Barry Fisch, Assistant Professor of Optometry, O.D., MCO
- Celia Hinrichs, Instructor in Optometry, O.D., MCO
- Douglas Hoffman, Instructor in Optometry, O.D., NEWENCO
- Hyman R. Kamens, Professor of Optometry, O.D., MCO
- Stanley Klein, Professor of Psychology, M.A., Ph.D., Clark University
- James M. Kluckman, Assistant Professor of Optometry, O.D., Southern College of Optometry
- Frank Kozol, Professor of Optometry, O.D., MCO
- Paul Lappin, Professor of Physiological Optics, O.D., MCO; M.S., Ph.D., Indiana University
- Richard Laudon, Assistant Professor of Optometry, O.D., MCO
- Janet Lemoine, Assistant Professor of Optometry, O.D., MCO
- Arthur Levinson, Associate Professor of Optometry, O.D., MCO
- John Lynch, Instructor in Optometry, O.D., Pennsylvania College of Optometry
- Glen L. McCormack, Associate Professor of Physiological Optics and Optometry, O.D., Indiana University; Ph.D., University of California, Berkeley
- Eileen C. McGill, Assistant Professor of Optometry, O.D., NEWENCO
- Paul A. McManus, Instructor in Optometry, O.D., PCO
- Gary L. Moss, Assistant Professor of Optometry, O.D., MCO
- Foster Namias, Professor Emeritus of Optometry, O.D., D.O.S., MCO
- Srinivas Natrajan, Associate Professor of Physiology and Pharmacology, Ph.D., Virginia Polytechnic Institute; M.S., Massachusetts College of Pharmacy; M.S., Auburn University; B.V.Sc., Osmania University, India
- Charles Patorgis, Instructor in Optometry, O.D., NEWENCO

Robert Perlin, Associate Professor of Optometry, O.D., Pennsylvania College of Optometry

John Pietrantonio, Instructor in Optometry, O.D., NEWENCO

Walter L. Potaznick, Assistant Professor of Optometry, O.D., MCO

William Primpas, Assistant Professor of Optometry, O.D., MCO

Concetta Raciti, Instructor in Optometry, O.D., NEWENCO

Clifford Scott, Associate Professor of Optometry, O.D., MCO

Jeanette Sewall, Instructor in Optometry, O.D., NEWENCO

F. Dow Smith, Professor of Optics, M.A., Queens University, Canada; Ph.D., University of Rochester

Joseph Svagdys, Professor of Optometry, O.D., MCO

Frank Thorn, Associate Professor of Visual Science, Ph.D., University of Rochester; O.D., NEWENCO

Edmund Walkowiak, Professor of Physiology, Ed. M., Boston University; Ph.D., University of Connecticut

F. Eleanor Warner, Head Librarian, M.S.L.S., Simmons College

Roger Wilson, Instructor in Optometry, O.D., NEWENCO

Mark B. Zorn, Associate Professor of Biochemistry, Ph.D., Columbia University; O.D., NEWENCO

### *Part-Time, 1982-1983*

Robert Allard, Assistant Professor of Optometry, O.D., Illinois College of Optometry

George Annas, Visiting Lecturer, J.D., Harvard Law; M.P.H., Harvard School of Public Health

John Asarkof, Professor of Optometry, O.D., MCO

Jerome Avorn, Assistant Professor of Preventive and Social Medicine, M.D., Harvard Medical School

J. Andrew Billings, Visiting Lecturer, M.D., Harvard Medical School

Irma Bloom, Instructor in Clinical Social Work, M.S.W., Simmons College

Gregory Bodrie, Instructor in Optometry, O.D., NEWENCO

Stephen Byrnes, Instructor in Optometry, O.D., MCO

James Casazza, Assistant Professor of Optometry, O.D., MCO

Anthony Cavallerano, Assistant Professor of Optometry, O.D., MCO

Jerry Cavallerano, Instructor in Optometry, O.D., NEWENCO

Terry Chin, Instructor in Optometry, O.D., MCO

Michael Feinberg, Instructor in Optometry, O.D., MCO

Matthew Garston, Associate Professor of Optometry, O.D., MCO

Ellen Gilman, Instructor in Optometry, Ed.M., Boston State College; O.D., NEWENCO

William Gleason, Assistant Professor of Optometry, O.D., MCO

Randy Goldman, Instructor in Optometry, O.D., NEWENCO

Rodney Gutner, Assistant Professor of Optometry, O.D., MCO

Ed Hackman, Instructor in Optometry, O.D., MCO

- David Higgins, Assistant Professor of Optometry, M.S., Ph.D., Pennsylvania State University; O.D., MCO
- Donald Hill, Instructor in Optometry, O.D., MCO
- Richard Houghton, Instructor in Optometry, O.D., MCO
- Jon Jenkins, Assistant Professor of Health Science, M.D., Harvard Medical School
- Sumner Kagan, Assistant Professor of Optometry, O.D., MCO
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